

Remarks

Claims 1, 2, and 4-20 are pending in the application, of which claims 1, 2, and 4-20 are rejected. By this paper, Applicant amends claims 1, 7, 11, 16, and 20; and cancels claim 18.

Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 1, 2, and 4-20 under 35 U.S.C. § 103(a) as being unpatentable over Reddoch et al. (US 6,585,115) in view of Simpson et al. (US 6,745,856) and further in view of Langen (US 3,945,537).

Amended claim 1 requires that "the positive displacement pump is connected to the output orifice by a liquid tight coupling". The Examiner states that "[i]t would have been obvious at the time the invention was made . . . to have used the output unit, orifice and valve of Langen in the tank of Reddoch et al. as modified, to similarly regulate the outflow of the tank thereof" and that "Langen shows . . . an outlet 50 located between the hub and the conical wall, and a plate 26 with openings 30 for regulating the outflow which is read as a gate valve." Reddoch et al. and Simpson et al. do not teach a liquid tight coupling between the output orifice and the pump. Langen teaches an outlet 50 (See Figures 1-3). The outlet 50 of Langen is fixed and not closable. (See column 3, lines 61-67). Langen also teaches a disc 26 having a ring 28 and openings 30 to aid in conveying material. (Column 3, lines 14-27). Langen has an adjusting means (shown in Figure 3) to discharge differing amounts of material using a slider member 74. (Column 4, lines 13-35). As seen from Figure 4, even when the slider member 74 is in a "down" position and contacting ring 28, material would still be able to flow through openings 30 and through opening 50. (See Figures 2-3). Additionally, Langen is for use with a material, such as lignate (Column 1, lines 4-7), which does not require a liquid tight seal. Therefore, Langen would not require and does not teach a liquid tight coupling. The combination of Reddoch et al., Simpson et al. and Langen do not teach, suggest, or provide any reason to provide all of the elements, and therefore claim 1 is nonobvious.

Claims 2 and 4-15 depend from claim 1 and are therefore nonobvious for at least the reasons stated above with respect to claim 1.

Claims 7 and 11 are amended to correspond with amendments to claim 1.

Additionally, claims 14-15 require a "gate valve". The Examiner states that Langen provides "an outlet 50 located between the hub and the conical wall, and a plate 26 with openings 30 for regulating the outflow which is read as a gate valve." A gate valve is used in creating a liquid tight seal in the closed position as it is often used in piping and other similar applications for metering liquids. As discussed with respect to claim 1, Langen does not provide a liquid tight seal. And for the reasons stated here and above with respect to claim 1, the combination of references does not teach, suggest or provide any reason to provide all of the elements, and therefore claim 1 is nonobvious.

Amended claim 16 now requires a closable output orifice and the limitations from now canceled claim 18 requiring "wherein the output orifice has a valve arranged to assume several positions between fully closed and fully open, in order to control the output rate of the bulk material containing liquid, the valve in the fully closed position being substantially liquid tight." Reddoch et al. and Simpson et al. do not teach a valve being substantially liquid tight in the closed position at the orifice. Langen teaches an outlet 50 (See Figures 1-3). The outlet 50 of Langen is fixed and not closable. (See column 3, lines 61-67). Langen also teaches a disc 26 having a ring 28 and openings 30 to aid in conveying material. (Column 3, lines 14-27). Langen has an adjusting means (shown in Figure 3) to discharge differing amounts of material using a slider member 74. (Column 4, lines 13-35). As seen from Figure 4, even when the slider member 74 is in a "down" position and contacting ring 28, material would still be able to flow through openings 30 and through opening 50. (See Figures 2-3). Additionally, Langen is for use with a material, such as lignate (Column 1, lines 4-7), which does not require a liquid tight seal. Therefore, Langen would not require and does not teach a liquid tight coupling. The combination of Reddoch et al., Simpson et al. and Langen do not teach, suggest, or provide any reason to provide all of the elements, and therefore claim 16 is nonobvious.

Claims 17 and 19 depend from claim 16 and is therefore nonobvious for at least the reasons stated above with respect to claim 16.

Claim 18 is cancelled and the limitations incorporated into claim 16.

Amended claim 20 now requires "a closable output orifice between the periphery and the convex dome, the output orifice being substantially liquid tight when in a closed position". Reddoch et al. and Simpson et al. do not teach a closable orifice being substantially liquid tight in the closed position. Langen teaches an outlet 50 (See Figures 1-3). The outlet 50 of Langen is fixed and not closable. (See column 3, lines 61-67). Langen also teaches a disc 26 having a ring 28 and openings 30 to aid in conveying material. (Column 3, lines 14-27). Langen has an adjusting means (shown in Figure 3) to discharge differing amounts of material using a slider member 74. (Column 4, lines 13-35). As seen from Figure 4, even when the slider member 74 is in a "down" position and contacting ring 28, material would still be able to flow through openings 30 and through opening 50. (See Figures 2-3). Additionally, Langen is for use with a material, such as lignate (Column 1, lines 4-7), which does not require a liquid tight seal. Therefore, Langen would not require and does not teach a liquid tight coupling. The combination of Reddoch et al., Simpson et al. and Langen do not teach, suggest, or provide any reason to provide all of the elements, and therefore claim 20 is nonobvious.

Conclusion

In view of the foregoing, Applicant respectfully asserts that the application is in condition for allowance, which allowance is hereby respectfully requested.

The Petition fee of \$245.00 is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

Respectfully submitted,

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